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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/710,726 | 07/30/2004 | Toshihiro Mori | 18.025-AG | 4725 |

29453 7590 05/03/2006

JUDGE PATENT FIRM
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JAPAN

EXAMINER

RATCLIFFE, LUKE D

ART UNIT

PAPER NUMBER

3662

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/710,726 | Applicant(s) MORI ET AL. | |
| | Examiner Luke D. Ratcliffe | Art Unit 3662 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6, 7, 10, 11, 13, 14, 16, and 17 rejected under 35 U.S.C. 102(b) as being anticipated by Katayama (5808727).

Referring to **claims 1, 6, and 13**, Katayama shows a scanning range sensor for determining distance to an object including a rotary member (figure 1), a light transmitting window (figure 1 Ref 12), a scanning mirror disposed on the top wall (figure 1 Ref 30a), a reflecting mirror disposed on the top wall ((figure 1 Ref 30b), a stator (figure 1 Ref 36), a stationary shaft (figure 1 Ref 17) and a photodetector (figure 2).

Referring to **claim 2**, Katayama shows the scanning optical system (figure 1 Ref 16 and figure 1).

Referring to **claim 3**, Katayama shows a scanning range sensor wherein signals obtained by the photodetector are output signals from the rotational position detector

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are transmitted to the distance computation circuit interiorly through the stationary shaft (column 1 line 55-63 and figures 1-3).

Referring to **claim 4**, Katayama shows the scanning optical system of claim 4 (figures 1 and 2).

Referring to **claims 7 and 14**, Katayama shows a scanning system that rotates in one direction continuously (column 3 line 50-60).

Referring to **claims 10 and 16**, Katayama shows a rotational position detector is a resolver for detecting rotational angle (column 1 line 55-63).

Referring to **claims 11 and 17**, Katayama shows the range sensor that includes a bearing, a rotor magnet, and a through hole (column 5 line 20-59 and figures 1 and 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 8, 12, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (5808727).

Referring to **claims 5, 12, and 18**, Katayama shows a scanning range sensor for determining distance to an object including a rotary member (figure 1), a light transmitting window (figure 1 Ref 12), a scanning mirror disposed on the top wall (figure 1 Ref 30a), a reflecting mirror disposed on the top wall ((figure 1 Ref 30b), a stator (figure 1 Ref 36), a stationary shaft (figure 1 Ref 17) and a photodetector (figure 2).

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However Katayama is silent as to the source of the light. It would have been obvious to use a LED because this is a common source of a laser and adds no new or unexpected results.

Referring to **claims 8 and 15**, Katayama shows a scanning range sensor for determining distance to an object including a rotary member (figure 1), a light transmitting window (figure 1 Ref 12), a scanning mirror disposed on the top wall (figure 1 Ref 30a), a reflecting mirror disposed on the top wall ((figure 1 Ref 30b), a stator (figure 1 Ref 36), a stationary shaft (figure 1 Ref 17) and a photodetector (figure 2). However Katayama shows a scanning range finder that swings in a continuous direction at a continuous speed. It would be obvious to modify Katayama to swing in a reciprocating movement within a predetermined angel range because this allows the viewed area to be more selective and is more efficient if there is only a small angle that is of interest.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (5808727) in view of Sebastian (5416321).

Katayama shows a scanning range sensor for determining distance to an object including a rotary member (figure 1), a light transmitting window (figure 1 Ref 12), a scanning mirror disposed on the top wall (figure 1 Ref 30a), a reflecting mirror disposed on the top wall ((figure 1 Ref 30b), a stator (figure 1 Ref 36), a stationary shaft (figure 1 Ref 17) and a photodetector (figure 2). However Katayama is silent as to the type of modulation that is used. It would be obvious to use AM modulation because this is a common type of modulation and adds no new or unexpected results.

Allowable Subject Matter

Claims 19-21 are allowed.

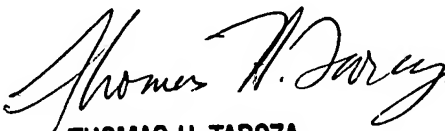
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

LDR


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